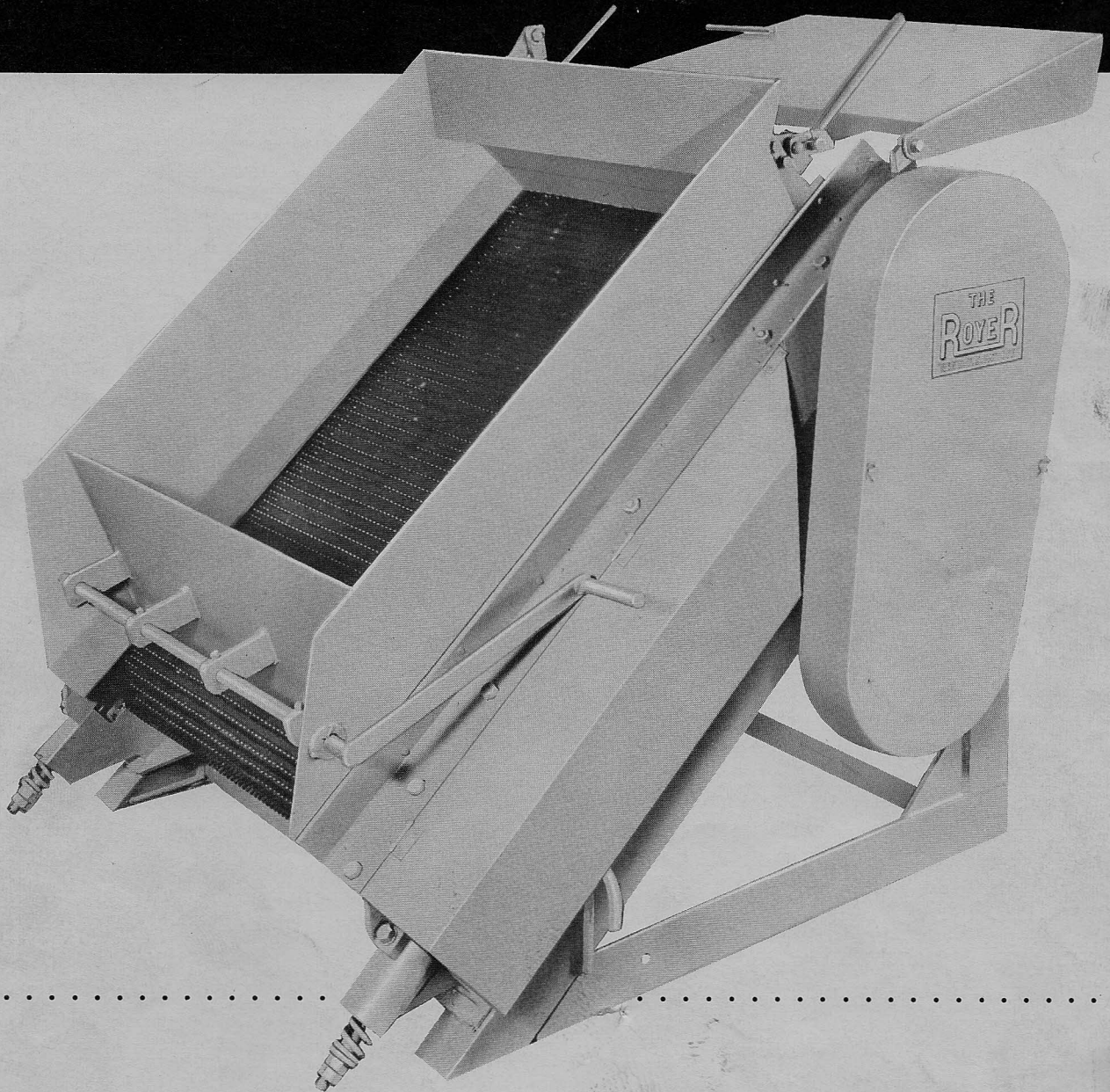




# ROYER SAND SEPARATORS AND BLENDERS



A series of portable and stationary sand conditioners for the small or medium-sized foundry or the core room and side floors of the production shop.

Royer SAND SEPARATORS AND BLENDERS are manufactured in a wide range of sizes to provide fast, efficient sand preparation in tonnages to meet any foundry need . . . portable or stationary . . . hand-

shovel, tractor-bucket feeding or "in-system" installations. The combing and mixing action in the receiving hopper releases hot gases—giving initial cooling; further cooling is accomplished with the open discharge stream.

Scrap, wedges, burned cores and other refuse gravitate to the lower end of the hopper for discharge.

160.00 \$250.00

ROYER

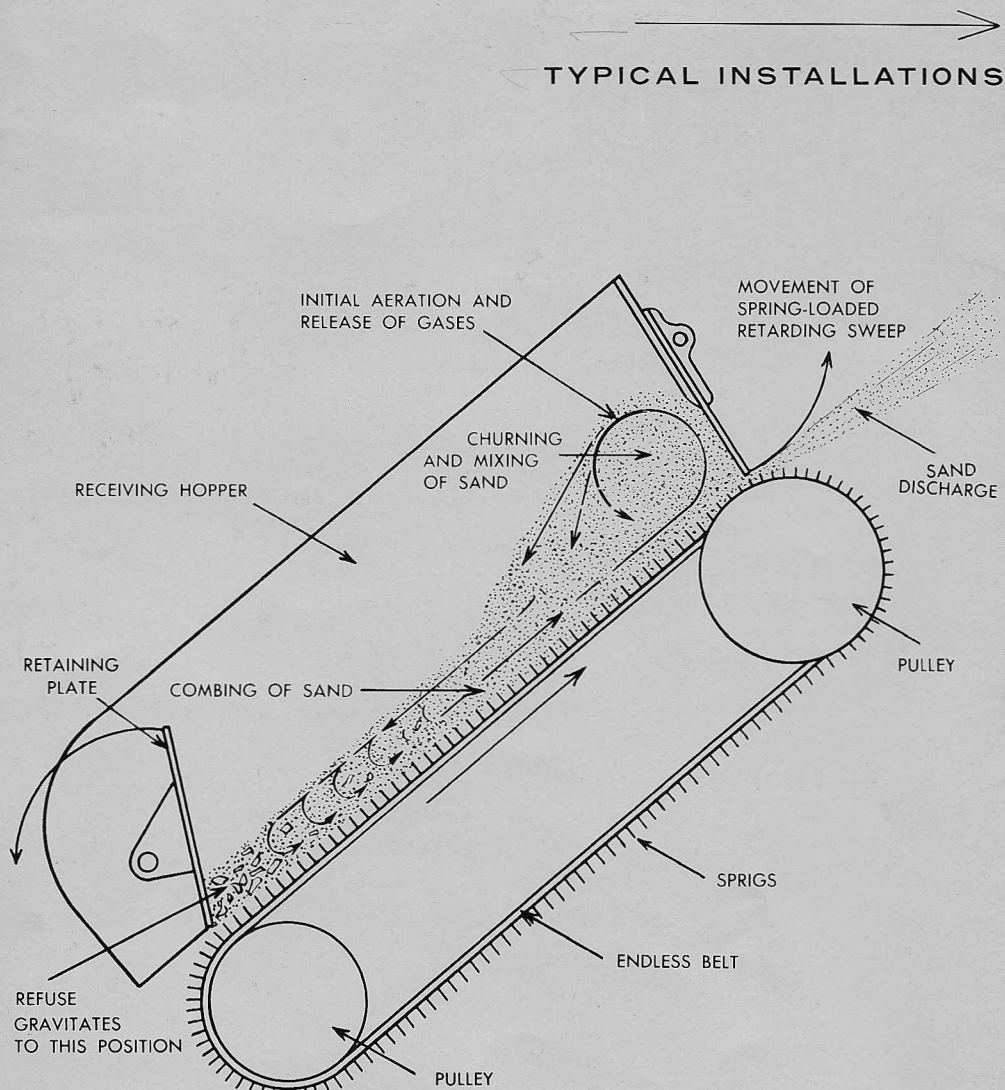
# ROYER SAND SEPARATORS AND BLENDERS

## Operating Principle

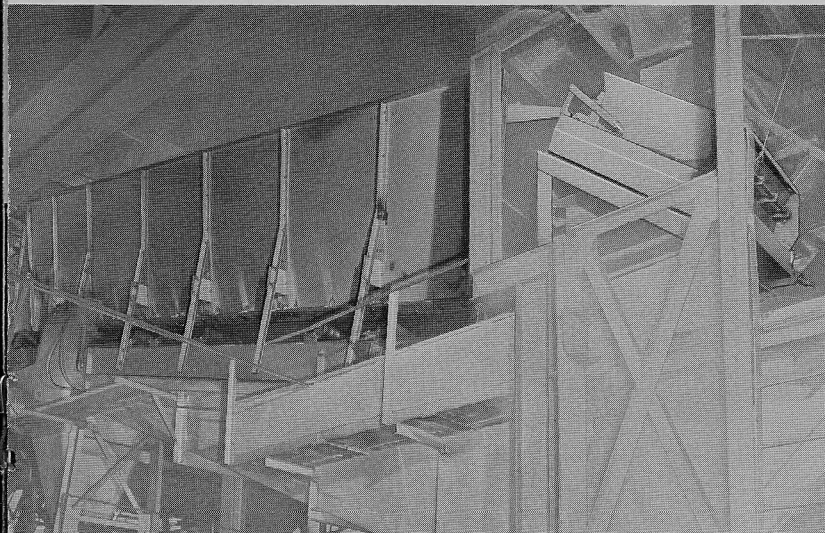
Royer Sand Separators and Blenders operate on a unique principle that combines combing of the sand with churning, mixing and *cooling*. The discharged sand is thoroughly separated and *cooled*.

Sand fed into the hopper comes into contact with sprigs on a swiftly moving combing belt. These sprigs comb the sand into granular form—the grains falling into pockets between the sprigs. The sand is *cooled* and fluffed because of the churning and mixing action in the hopper. As the pockets of sand move along the inclined belt and pass under the retarding sweep they are discharged in an arc for a thorough *cooling*. The open discharge provides even additional *cooling*.

Refuse, such as wedges, burned cores and other foreign material too large to fall in the pockets, falls back to the lower end of hopper. This material can be discarded when the belt is running free of sand by releasing the retaining plate.



TYPICAL INSTALLATIONS



◀ **MECHANIZED "IN-LINE" INSTALLATION**—In this continuous operation, Royer Separator (at top right in photo at left) discharges to conveyor belt in air cooling plenum chamber.



▶ **HAND-SHOVEL UNIT**—one of the smaller Royer portable Separators in action.

## *Advantages of Royer Separators and Blenders*

**VERSATILE LINE** Machines for any size foundry . . . portable or stationary . . . capacities from 4 to 180 tons/hour.

**COMBATS HOT SAND PROBLEMS** *Thorough* cooling because of the churning action in the hopper and the open discharge stream.

**REDUCES NEW SAND REQUIREMENTS** by *thorough* blending of old and new sand granules.

**GIVES FINER FINISHES TO CASTINGS** Surface grinding and cleaning costs are reduced because of fewer surface defects . . . smoother castings come from cool, clean, open, fluffy sand of good permeability.

**CLEANER, COOLER SAND** No need for hand riddling when a Royer is used.



**BUCKET LOADING ARRANGEMENT**—This machine at a large midwestern grey iron foundry has cut scrap loss by delivering cooled fluffed sand to the molders station.



**MULLER DISCHARGES DIRECTLY**—into this stationary Royer unit . . . cooled, blended and aerated sand goes from bucket to molding station.

# ROYER

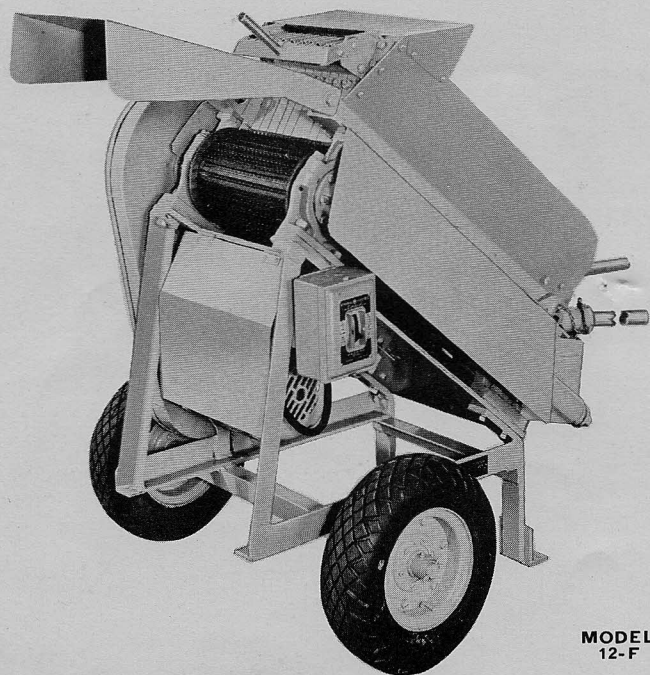


## Sand Separators and Blenders for Hand-Shovel Fed Operations

*CAPACITY—up to 15 tons/hour*



MODEL  
10-F



MODEL  
12-F

## General Specifications

*Subject to change without notice.*

|                             | MODEL<br>10-F | MODEL<br>12-F |
|-----------------------------|---------------|---------------|
| Capacity, up to (tons/hour) | 10            | 15            |
| Length (inches)             | 33            | 47            |
| Width (inches)              | 29            | 37            |
| Height (inches)             | 39            | 50            |
| Belt Width (inches)         | 10            | 12            |
| Standard Hopper (inches)    | 17½ x 22½     | 18 x 26       |
| Tires                       | 12" semi-     | 14" semi-     |
|                             | pneumatic     | pneumatic     |
| Drive (hp)                  | 1             | 1½            |

Motors are 1740 RPM, totally enclosed, fan cooled, with dustproof ball bearings, manual starters, switch and 25 feet of cable. *Note: Voltage, phase and cycle must be specified when ordering.*

|                             |     |     |
|-----------------------------|-----|-----|
| Approx. net weight (pounds) | 251 | 630 |
| Approx. shipping weight     | 283 | 760 |

### FRAME ASSEMBLY

**FRAME 10-F** Tubular steel streamlined construction; welded for rigidity and long lasting service. Rust resistant gray iron side members. Detachable handles for compact storage.

**FRAME 12-F** Heavy duty angle-iron construction; welded for rigidity and long lasting service. Detachable handles for compact storage.

### BELT AND PULLEY ASSEMBLY

**BELT** Endless type; tough, resilient composition for long life of rugged duty.

**SPRIGS** Specially shaped, tempered alloy steel. Mounted in rows and spaced to prevent impaling of material. Long wearing, will not break or require sharpening.

**PULLEYS** Precision machined cast iron; truly aligned.

**SHAFTS** Large diameter, cold rolled steel. 12-F shaft precision machined.

**BEARINGS** Large sealed ball bearings, totally enclosed in dirt-tight, grease-packed, machined housings.

### HOPPER ASSEMBLY

**HOPPER** Heavy gauge steel, bolted to frame.

**RETARDING SWEEP** Adjustable heavy duty sweep fingers; spring loaded to prevent jamming. Design does not employ shear pins.

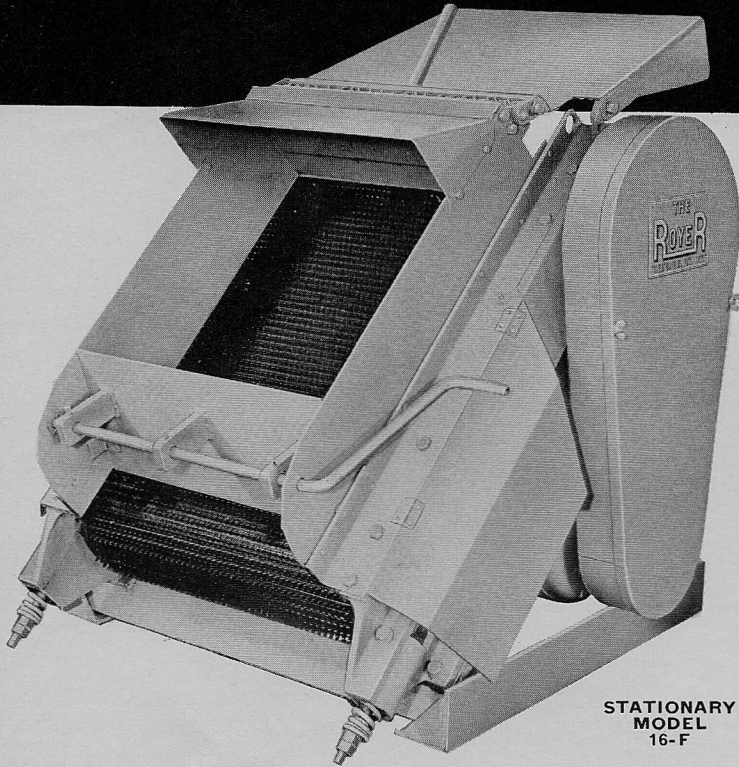
**RETAINING GATE** Steel plate or screen. Hand operated.

# ROYER



## Sand Separators and Blenders

*CAPACITY—up to 60 tons/hour*



STATIONARY  
MODEL  
16-F



PORTABLE  
MODEL  
25-F

## General Specifications

*Subject to change without notice.*

|                                       | MODEL<br>16-F | MODEL<br>25-F |
|---------------------------------------|---------------|---------------|
| Capacity, up to (tons/hour) . . . . . | 25            | 60            |
| Dimensions, Portable Models           |               |               |
| Length (inches) . . . . .             | 54            | 56            |
| Width (inches) . . . . .              | 41            | 49            |
| Height (inches) . . . . .             | 45            | 46            |
| Dimensions, Stationary Models         |               |               |
| Length (inches) . . . . .             | 41            | 42            |
| Width (inches) . . . . .              | 31            | 40            |
| Height (inches) . . . . .             | 41            | 41            |
| Belt Width (inches) . . . . .         | 16            | 25            |
| Drive (hp) . . . . .                  | 2             | 5             |

Motors are 1740 RPM, totally enclosed, fan cooled, with dust-proof ball bearings, and are equipped with magnetic starter with push button in cover and 25 feet of rubber covered cable.  
*Note: Voltage, phase and cycle must be specified when ordering.*

| Weights (approx.) Portable Models   |      |      |
|-------------------------------------|------|------|
| Net . . . . .                       | 1150 | 1530 |
| Gross . . . . .                     | 1300 | 1760 |
| Weights (approx.) Stationary Models |      |      |
| Net . . . . .                       | 962  | 1350 |
| Gross . . . . .                     | 1112 | 1520 |

### FRAME ASSEMBLY

**FRAME** Angle-iron and steel plate construction; welded for rigidity and long lasting service.

### BELT AND PULLEY ASSEMBLIES

**BELT** Endless type; tough, resilient composition for long life of rugged duty.

**SPRIGS** Specially shaped, tempered alloy steel. Mounted in rows and spaced to prevent impaling of materials. Long wearing, will not break or require sharpening.

**PULLEYS** Precision machined; truly aligned.

**SHAFTS** Large diameter, precision machined.

**BEARINGS** Large sealed ball bearings, totally enclosed in dirt-tight, grease-packed, machined housings.

### HOPPER ASSEMBLY

**HOPPERS** Standard hoppers are suited for continuous feeding by conveyor, bucket line or storage hopper. Batch hoppers (available for Model 25-F only) are designed for *controlled* feeding with 8 cu. ft. tractor buckets.

**RETARDING SWEEP** Steel; spring loaded to prevent jamming. Adjustable. Design does not employ shear pins.

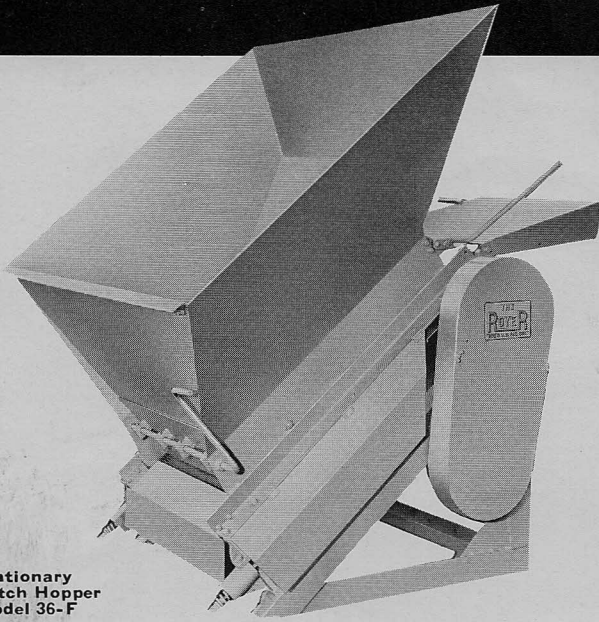
**RETAINING GATE** Steel plate or screen. Hand operated.

# ROYER

## Sand Conditioners and Blenders

### Model 36-F

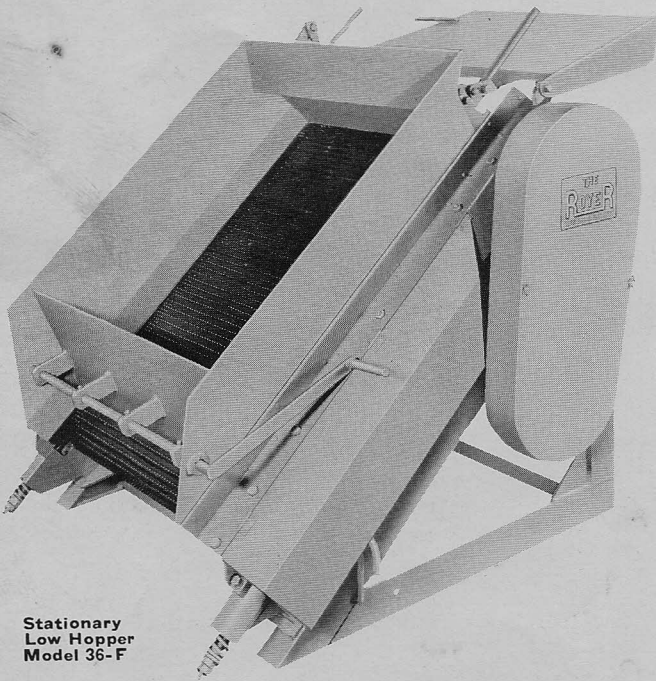
CAPACITY—up to 180 tons/hour



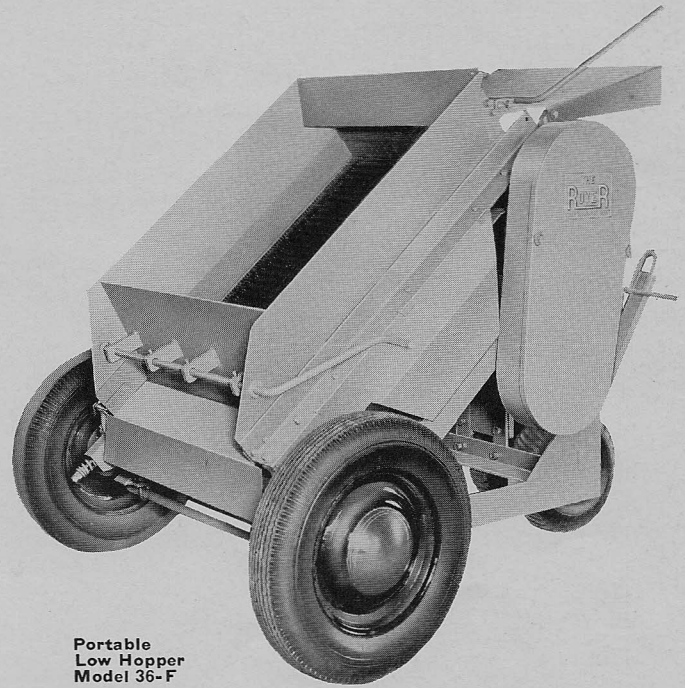
Stationary  
Batch Hopper  
Model 36-F



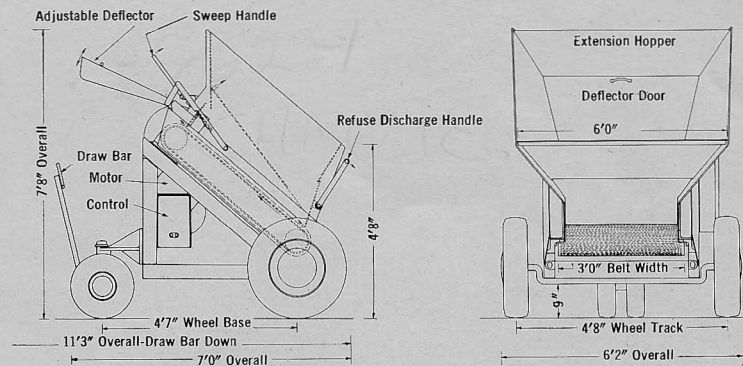
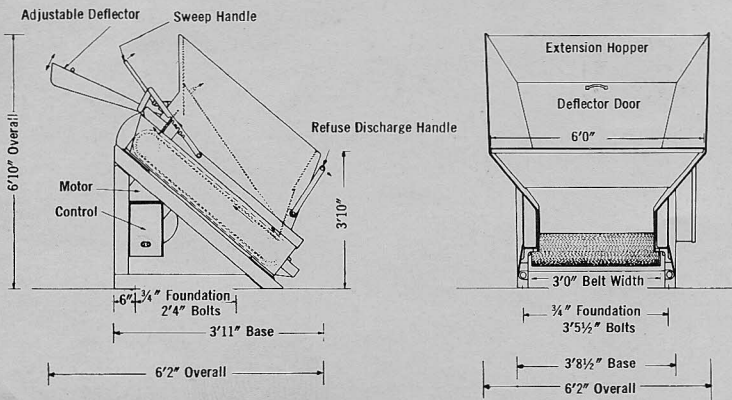
Portable  
Batch Hopper  
Model 36-F

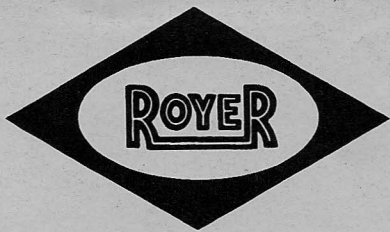


Stationary  
Low Hopper  
Model 36-F



Portable  
Low Hopper  
Model 36-F





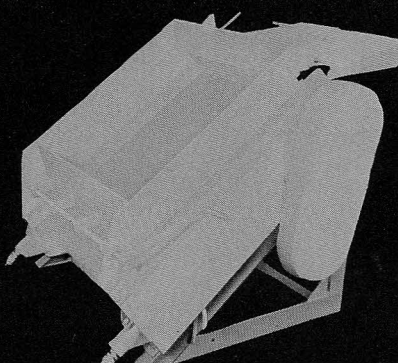
## General Specifications

Subject to change without notice.

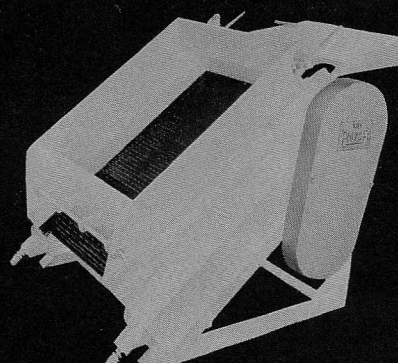
MODEL  
36-F

|                               |               |
|-------------------------------|---------------|
| Capacity, up to . . . . .     | 180 tons/hour |
| Belt Width (inches) . . . . . | 36            |
| Drive (hp) . . . . .          | 15            |

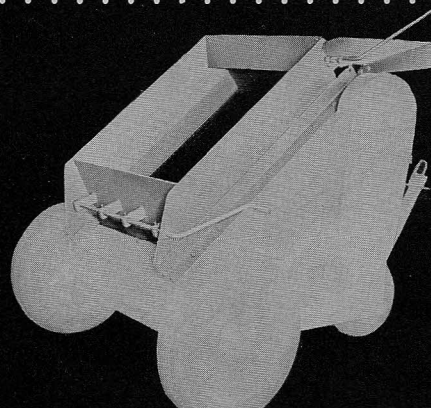
Motors are 1740 RPM, totally enclosed, fan cooled, with dustproof ball bearings, switch, magnetic starter with push button in cover and 25 feet of rubber covered cable. *Note: Voltage, phase and cycle must be specified when ordering.*



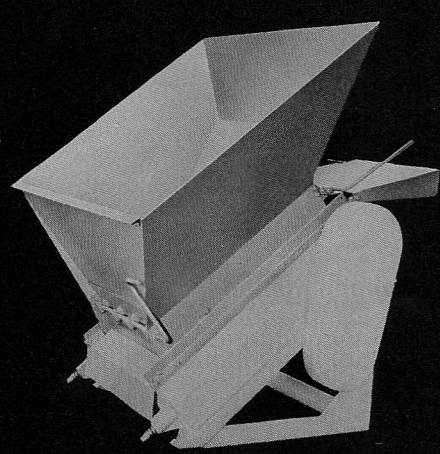
Frame



Belt and Pulley



Low Hopper



Batch Hopper

|                          | DIMENSIONS (INCHES) |    |    | WEIGHT (APPROX. LBS.) |       |            |       |
|--------------------------|---------------------|----|----|-----------------------|-------|------------|-------|
|                          | L                   | W  | H  | With Drive            |       | Less Drive |       |
|                          |                     |    |    | Net                   | Gross | Net        | Gross |
| Stationary, Low Hopper   | 53                  | 52 | 55 | 2100                  | 2200  | 1550       | 1650  |
| Stationary, Batch Hopper | 74                  | 74 | 82 | 2550                  | 2645  | 2000       | 2100  |
| Portable, Low Hopper     | 77                  | 65 | 66 | 2405                  | 2565  | 1855       | 2015  |
| Portable, Batch Hopper   | 84                  | 74 | 92 | 2850                  | 3010  | 2300       | 2460  |

### FRAME ASSEMBLY

**FRAME** Angle-iron and steel plate construction; welded for rigidity and long lasting service.

### BELT AND PULLEY ASSEMBLIES

**BELT** Endless type; tough, resilient composition for long life of rugged duty; 36 inches wide.

**SPRIGS** Specially shaped, tempered alloy steel. Mounted in rows and spaced to prevent impaling of material. Long wearing, will not break or require sharpening.

**SHAFTS** Large diameter, precision machined cold rolled steel.

**PULLEYS** Precision machined; truly aligned.

**BEARINGS** Large sealed ball bearings, totally enclosed in dirt-tight, grease-packed, machined housings.

### HOPPER ASSEMBLY

**HOPPERS** Low hoppers are suited for continuous feeding by conveyor bucket line or storage hopper. Batch hoppers are 72 inches wide, have an adjustable control gate to regulate the flow of sand to the belt. Designed for feeding with tractor buckets up to 1/2 cu. yd.

**RETARDING SWEEP** Steel; spring loaded to prevent jamming.

**SWEEP** Adjustable. Design does not employ shear pins.

**RETAINING GATE** Steel plate. Hand operated.

## STEP-BY-STEP MECHANIZATION

—the Royer-Way to  
combat rising costs

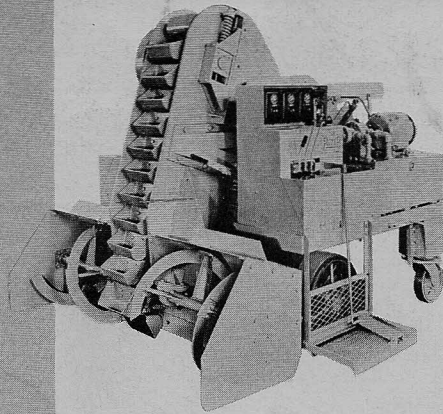
Most Royer Foundry Sand Conditioning Units are engineered for Step-by-Step Mechanization. This is the realistic plan for mechanization for the small and medium sized foundry—adding steps in mechanization as they can be economically justified.

The Royer-Way enables the small and medium sized foundry to enjoy, immediately, many of the cost cutting advantages of complete mechanization. It amounts to a pay-as-you-go plan, for facts prove that most Royer Units pay for themselves in less than two years—in labor savings alone.

With Step-by-Step Mechanization it becomes possible for the small and medium sized foundry to hold down rising costs and compete with the larger foundries without the prohibitive expense of complete and final mechanization.

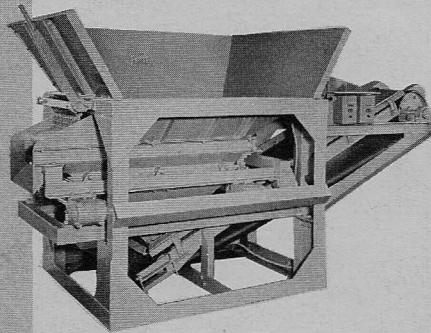
Your foundry-wise Royer Agent will be glad to discuss your problem and show you how Step-by-Step Mechanization can pay for itself in your foundry.

**ROYER, FOREMOST IN SAND CONDITIONING  
EQUIPMENT, also manufactures these  
cost cutting, foundry units . . .**



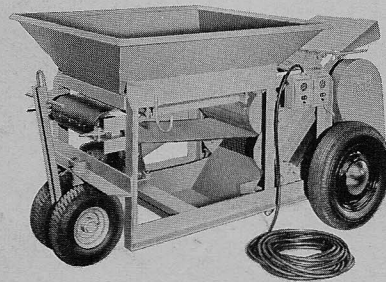
### THE ROYER SAND-HOG

A one-man operated, highly maneuverable, self-propelled and self-loaded sand conditioning unit. Moves into the sand heap, scoops up, completely conditions and discharges from 40 to 60 tons of sand per hour. Complete conditioning includes magnetic separation of all ferrous scrap and elimination of core butts, wedges and other refuse, thorough mixing and blending for even distribution of moisture and two aeration operations. Completely described in Bulletin RPL-57.



### THE ROYER SCRAP CONTROL

Royer Scrap Control Units are foundry-designed to provide immediate cost-saving mechanization of shakeout and sand cleaning operations with the lowest possible cost. Intended for use with a front-end loader. Pit-less design permits relocation by moving with an overhead crane. (All equipment is above floor level.) Cleans 60 tons of sand per hour. Request Bulletin SC58.



### THE ROYER MAGNA-SAN

The new Royer MAGNA-SAN is foundry engineered to magnetically clean, mix, blend and aerate 45 tons of sand per hour, cut sand conditioning costs and produce cleaned sand that will increase yield and quality of castings. The Portable MAGNA-SAN is designed to be easily moved between molding stations; the Stationary MAGNA-SAN is designed for permanent installation or overhead crane portability, operating independently or as an integral part of a system. Both units are compactly built and designed for mechanized feeding by front-end loader, clam bucket, etc. Ask for Bulletin RM57.

In this area,  
Royer Equipment  
is sold and  
serviced by

PHONE  
1-717-287-9624  
CHARLIE



**ROYER FOUNDRY & MACHINE CO.**

158 PRINGLE STREET / KINGSTON, PENNA.

FOREMOST IN SAND CONDITIONING EQUIPMENT

RM 333-10M-961P

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